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ABSTRACT

Recent commission and task force reports calling for significant improvements in American education are considered in this set of three papers, and methods for implementing the recommendations are suggested. In his paper, Glen Harvey reviews the reports, noting the extent to which they fail to consider change implementation research and commenting on the impracticality of many of the recommendations. Susan Loucks-Horsley and Pat L. Cox suggest a three-part strategy to follow when adapting a recommendation to a local situation: first, define the improvement sought; second, design suitable support activities; and third, specify the new roles of the participants. The final paper, by David P. Crandall, calls for a commitment to adopting currently identified improvement programs to raise student achievement and professional competence in the short run while simultaneously increasing active investigation into completely new concepts of schooling to provide a basis for improvement programs to be adopted in the long run. (PGD)

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IMPLEMENTING THE RECOMMENDATIONS OF THE NATIONAL COMMISSION AND STUDIES OF EDUCATION, OR WHAT THEY FAILED TO MENTION

Recent Reports Concerning Education
OR
The Road to Nirvana: You Can't Get There From Here

Glen Harvey

It's All in the Doing: What Recent Research Says About Implementation

Susan Loucks-Horsley
Pat L. Cox

Building an Infrastructure for Innovation and Improvement:
Short and Long-Term Strategies

David P. Crandall

American Educational Research Association

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RECENT REPORTS CONCERNING EDUCATION
OR
THE ROAD TO NIRVANA: YOU CAN'T GET THERE FROM HERE

Glen Harvey

During the last year, public attention has been riveted on the decline and potential rebirth of American education. Fueled by the National Commission on Excellence in Education's (1983A) charge that the "educational foundations of our society are presently being eroded by a rising tide of mediocrity" (p. 5), 1983 witnessed a groundswell of public and political energy and enthusiasm for improving education. With this support for change came seemingly endless reports and sets of recommendations concerning the present and future condition of education from federal, state, and local perspectives. These, in turn, were followed by innumerable synopses and cross analyses of the initial reports, as well as a variety of efforts to translate the recommendations into state, school, and classroom level policies and practices.

With 1983 so clearly being the year when America rediscovered education and its many shortcomings, could 1984 be the year of tangible educational improvement, the year that transcends rhetoric to move forward to actually raise the quality of education? There is, of course, always that possibility. But all the signs are that the well orchestrated publicity and bombast of commissions and task forces have provided only the illusion of change and that the efforts of school officials to implement the highly publicized recommendations of these groups will ultimately result in little, if any, improvement.

The reason for this pessimistic prognosis lies not in the belief that education cannot be improved and that educators are not capable of change. On the contrary, there is abundant evidence that many schools have been successful in their efforts to improve and that educators are eager and willing to raise the quality of education they provide.[1] Rather, the cause for pessimism resides with the task forces and commissions themselves and with the public, political, and professional perceptions of the role such groups play in improving education. Instead of being viewed as one of many <u>means</u> for educational improvement -- as a catalyst for change and a source of ideas about weaknesses and alternative solutions -- the recommendations of these groups are perceived as <u>ends</u>. They are accepted as specifying the necessary and sufficient conditions for achieving excellence in education. Yet they disregard entirely how their recommendations are to be

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implemented -- how individuals ultimately responsible for education might go about trying to improve schools in the ways being suggested. And they ignore much, if not all, that research has taught about how schools have actually been able to change and become more effective. As a result, the reports have created enormous public pressure which functions to push educators forward only to repeat the mistakes of the past, propelling schools toward a false sense of excellence, soon to be dispelled as the recommendations fail to be implemented successfully or do not produce the intended results.

In this series of papers, our purpose is to place the recent commission and task force reports[2] in their proper perspective within the school improvement process and to provide the guidance necessary to maximize the opportunity that a school improvement effort will succeed, regardless of the source of the recommendations being implemented. To accomplish this, I begin in this paper by briefly reviewing the reports -- what they are and are not and what they can and cannot be expected to accomplish. Pat Cox and Susan Loucks-Horsley, in their paper, provide a comprehensive examination of the factors which must be considered if improvement efforts designed to implement the recommendations of these reports are to have any lasting effect. In the final paper, David Crandall describes two complementary scenarios for improving schools, one short term (5 year) scenario involving strategies which accept the current configuration of schools, the other longer term (10 year) scenario utilizing strategies designed to transform the educational enterprise.

On the Road (Again)

While most of the recent critiques of education share a common focus on educational decline and mediocrity and offer recommendations for improvement, they are somewhat more diverse in content and approach than might have been expected. Each begins with a slightly different conception of education and a set of assumptions about the roles of learning and schooling, presents a variety of evidence and arguments to indict American education as at best mediocre, suggests somewhat divergent goals for the educational process, and offers an array of diverse, wide ranging recommendations. Since syntheses of the various studies and reports now abound,[3] the temptation to provide still another detailed synopsis and cross analysis will be resisted. It is important to keep in mind, however, that differences in factors such as target audiences, purposes and intended outcomes, the basis upon which recommendations are made (e.g., research, commissioned papers, existing data, questionnaires, and personal testimony and opinion), and the complexion and nature of the task force/commission membership and funding/sponsorship source all can (and do) have significant impact on the final set of recommendations issued by each of the groups or individual authors, as does the sociopolitical context in which they are issued.

Even with these differences, a few general themes common to most of these reports have emerged. Among these are (a) the need to provide quality education to "all" students;[4] (b) a core curriculum which includes the basics (definitions of which differ); (c) higher standards, requirements, and expectations of/for students; (d) more time spent on instruction; (e) more emphasis on teacher preparation, qualifications, and certification and raising the status (and salaries) of the teaching profession; (f) a recognition that education prepares students for adulthood (with an emphasis in many reports on the relationship between education and America's economic stability and ability to compete; and (g) increased, broadly based, shared responsibility for school improvement, including the private sector and the community.

If these themes sound familiar, it is because they are not entirely new to education. Tyack and James (1983) point out that the most commonly cited recent recommendations fall into a fairly predictable pattern of previous negative assessments of American education. In liberal periods such as the 1930s, 1960s, and early 1970s, education is expected to serve the "disadvantaged," broaden its functions, and overcome rigidity. In conservative times such as the 1890s, 1950s, and 1980s, education is pushed to focus on the "talented," emphasize basics and academics, develop a more cohesive curriculum, and strengthen discipline. Furthermore, in many ways, commissions and task forces tend to reflect current trends rather than create new solutions. According to Theodore Sizer (1983), "task force and commission reports . . . legitimize what the schools have already started doing in response to . . . initial criticism" (p.1).

And if these themes sound vague as well, it is also because they are vague. Many of the reports themselves are at best described as reflecting a level of generality which provides only minimal guidance to schools; none provide the guidance necessary to ensure that their recommendations will be implemented.

In characterizing commission and task force reports of this type, Peterson (1984) suggests that such a report:

- is almost certain to exaggerate the problem it addresses;
- states only broad, general objectives;
- recommends changes that are beyond current technology and resources;
- does not spell out the details of its proposed innovations;
- seldom calls for institutional reorganization; and
- poorly documents the value of the solutions it proposes (pp. 9-10).

This is not to imply that the individual or collective sets of recommendations are without merit. Many ring true, at least in a general sense, and are quite useful in identifying perceived weaknesses in the educational system; indicating areas of public and political concern about particular aspects of education; providing sources of ideas and suggestions for ways to raise the quality of education; and generating a solid basis of support and enthusiasm for actively improving schools. But if the concern is to really achieve excellence in education rather than to simply discuss it -- placating a concerned public and creating issues around which to make political flourishes and promises -- then it is necessary to go well beyond the current commission and task force reports and begin to discuss practically -- in both the short- and long-term -- how schools can (and do) improve the quality of education they provide.

The idea that a critical aspect of successful school improvement is understanding how schools change -- how they successfully implement new practices and programs and how they become more effective -- is not in itself new. Considerable research has been conducted in the areas of implementation, school improvement, knowledge utilization, and effective schools and teachers, which together have yielded an impressive knowledge base which has proven useful not only to researchers but also to people actively involved directly in raising the quality of education. Unfortunately, however, in the rush to respond to the recent critiques of education, particularly the National Commission on Excellence in Education, there has been a tendency to forget -- or ignore -- almost all that has been learned about how to improve education.

It may not appear fair in all cases to criticize the various task forces, commissions, and authors for not including a discussion of this relevant research since for most, if not all, this was not their primary charge. There is justification, however, to question how these groups believe their recommendations are to be translated into practice. This is a particularly appropriate question to raise in connection with the Department of Education's National Commission on Excellence in Education. Secretary of Education Bell has made it clear that his intention is to have state, district, and local officials implement the Commission's recommendations and has orchestrated the publicity surrounding the Commission such that enormous public and political pressure for these recommended improvements has been generated. And yet, the Commission ignored the very research -- much of which was funded by the Department of Education -- which provides insight into how schools could actually go about doing what the Commission recommends.

Ignoring most or all of what is known about school improvement and the change process not only can lead to inappropriate and ill fated responses to the recommendations by state and local educators; it can also result in the recommendations themselves being inappropriate or not feasible. It allows the Commission on

Excellence, for example, to offer at times superficial, unclear recommendations, the practicality, implementation, and consequences of which do not appear to have always been adequately considered. These recommendations, in turn, become credible simply by virtue of their source -- the Secretary of Education's own commission. The pressure to make sense of such recommendations is thus transferred from the Commission to individuals whose days are already more than full with simply coping with the day to day activities of schooling and the multiple constraints which continuously operate to limit the options for improvement. While the finger of blame will be pointed directly at these individuals if their improvement efforts fail, the responsibility for creating a climate fostering rhetorical and illusory change and improvement should be traced to the source of the recommendations themselves -- a source which by virtue of its position and charge, has no accountability for seeing its recommendations translated into practice.

Consider, for example, the five major recommendations of the Commission on Excellence:

- strengthening graduation requirements and course requirements in the "New Basics," which includes computer science;
- more rigorous, measurable standards and higher expectations for academic performance and conduct;
- devoting more instructional time to learning the New Basics, e.g., more effective use of the existing school day, longer day, or lengthened school year;
- improved teacher preparation and teaching profession;[5] and
- accountability of educators and elected officials for providing leadership and of citizens for fiscal support and stability.

On the surface, these recommendations seem reasonable; in the abstract, few people would quarrel with their general thrust. Unfortunately, however, there is little of real substance to these recommendations, once their rhetorical aspects are discounted. In an analysis of six of the recent reports,[6] including that issued by the Commission, Peterson (1984) concludes that the recommendations tend to fall into one of three categories: "wholesome main courses for which no recipe is given; gourmet dishes of extravagant cost; and enticing desserts that . . . turn out to be nothing but sugar and air" (p.6).

Main courses include seemingly reasonable, supportable recommendations concerning classroom management, discipline, and homework -- recommendations many people have endorsed for years but have generally failed to translate into policies and practices which obtain the desired results. Simply continuing to restate good ideas and intentions is unlikely to result in excellent

education unless additional guidance is provided in how these ideas can be moved from the abstract to the concrete. (How to translate these main course staples into effective classroom practices provides much of the focus of the following two papers.)

The gourmet dishes, while more easily identified for what they are -- high cost items practically affordable by only a few -- are somewhat surprisingly among the most popular recommendations, given their accompanying financial burden. These include ideas such as extending the school day and/or year, raising teachers' salaries to a "market-sensitive" level, adopting 11 month teacher contracts, and providing grants and loans in order to attract outstanding students to the teaching profession.

Unlike the main courses and gourmet dishes which at least hold some potential for improving education, the puff pastry desserts are essentially window dressing with no substance. These include appealing -- but empty -- statements such as the Commission on Excellence's so-called "implementing recommendation" that the "teaching of English in high school should equip graduates to comprehend, interpret, evaluate, and use what they read" (National Commission on Excellence in Education, 1983A, p.25) -- an admirable sentiment but one which under scrutiny has little apparent practical meaning.

The fact that the Commission's (and others') recommendations tend to fall into these less than helpful categories -- and that constraints such as the financial burden of the gourmet delights as well as a variety of other social, political, demographic, economic, resource, and human constraints,[7] severely limit the options for improvement available to educators -- have not eliminated or even lessened the public and political pressure to act on the recommendations. And act is what many states, districts, and local schools have done, although it is not clear where the long-term funding for many of the initiatives is to come from or what tangible improvement-related outcomes are expected.

Much of the effort to respond to the recommendations of the Commission on Excellence has been at the state level. As Gregory Anrig, President of the Educational Testing Service, has pointed out, "reform is being translated into things that can be legislated, such as longer school days, more homework, and incentives for superior teachers" (Goldberg, 1984, p. 6). The Commission on Excellence (1983B), for example, claims that 42 states recently initiated curriculum reform efforts, 44 examined graduation requirements, and 42 addressed issues having to do with teacher certification and preparation. Education Week reports that in the area of instructional time alone, seven states have adopted measures to extend instructional time, ten are considering actions which would extend the school day or improve instructional time, sixteen are discussing the extension of the school year -- an action already taken by North Carolina, and ten are contemplating limitations on extracurricular activities (Walton, 1983). And in the area of curriculum, a thirty-six state survey conducted by the National Conference of State Legislatures

indicates that the most frequent legislative initiative in 1983 involved strengthening basic course requirements with eleven states introducing legislation to require additional coursework in math, foreign language, computer literacy, and/or English (Siegel, 1983). There are also estimates that 30 states are now developing guidelines on computer literacy for teachers. Overall, it is estimated that 104 state-level commissions to study aspects of school improvement have been established since 1980; 54 have been formed during 1983 alone (Walton, 1983).[8]

The correlation between these initiatives and the recommendations of the Commission on Excellence is quite high. But the question remains whether such school improvement efforts will yield the excellence in education the Commission and others desire. Unfortunately, changes of this legislative, policy type are more likely to create the illusion of moving toward excellence than they are to actually result in significant improvement. Even worse, however, -- perhaps because such changes also give the appearance of being relatively straightforward with few secondary consequences -- they can even have an unforeseen negative impact on the quality of education. Consider, for example, the recommendation that requirements in the "new basics" be raised in accordance with the Commission's recommendation: 4 years of English; 3 years each of mathematics, science, and social studies; and one-half year of computer science. Although reflective of a rather simplistic "more is better" approach, a recommendation of this type appears reasonable, particularly to a public concerned with the inability of its children (and adults) to read, write, and compute. Upon the release of A Nation at Risk, the clamor for the adoption of this particular basics-oriented recommendation was especially loud and strong -- and only became louder and stronger when the National Center for Education Statistics released its finding that only 2.6 percent of 1982 graduates actually met these requirements (Sweet, 1983).

Responding to this (and other) pressure, 26 states have established more demanding requirements for high school graduation and recommendations to raise graduation requirements are being considered by 24 other states (Walton, 1983). However, in response to proposed legislation to increase high school requirements to 3 years each of science and mathematics for all Florida students, a Florida ASCD Policy Task Force (1983) concluded

> that the short-range impact of requiring three years of mathematics and science will be to decrease the achievement of college-bound students in these subjects as a result of employing additional math and science teachers -- most of whom will not be qualified -- to meet the requirement. The overall effect may well be to reduce the caliber of mathematics and science teachers in Florida high schools (p. 40).

The group also warned of a possible increase in the drop-out of non-college bound students unable to meet the new requirements. In other words, in the short term, college bound students would be

harmed and non-college bound students might or might not be harmed, depending on their ability to adjust to new requirements which would essentially place them in college preparatory science and math courses. And in the long term, the group concluded that the requirement's impact

> will depend on whether some of the fundamental problems of teaching mathematics and science are solved...If the present action follows historical precedent...once the requirement is legislated the problem will be presumed to have been solved (p. 40).

This suggests, among other things, that an automatic adoption of the Commission's -- and others' -- recommendations without adequate analysis not only may not result in excellent education, but could, in fact, yield unexpected negative outcomes which are in contradiction to what is intended. It further suggests that an uncritical, unexamined acceptance of the recommendations of such commissions and task forces is not the most appropriate way of approaching and using the reports they issue to improve education. Rather, such reports should be viewed as catalysts for change, generators of support and enthusiasm for school improvement, indicators of potential weaknesses and public and political areas of concern and interest, and sources of ideas and suggestions for ways to raise the quality of education. They offer a place to begin the long process of improvement -- but not an end in themselves.

If they become more than this -- if they are given undeserved credibility simply by virtue of their status - and their recommendations are taken as "trutns" worthy of automatic enactment, then their impact can as easily be harmful as helpful to education. While skeptics and cynics often dismiss commissions as being essentially harmless because of their lack of substance, their impact may, in fact, hold potentially negative consequences. Automatic responses to recommendations which ignore the realities of schooling and the context in which it occurs can result in a variety of negative outcomes as, for example:

- Implementing policies and programs which are inappropriate or ill suited to the particular school or community. Schools are at what might be called different "stages of development" in their ability to respond to recommendations for improvement. For example, a school struggling to operate with severe financial constraints, discipline problems, skyrocketing drop-out rates, poor quality teachers and administrators, and so forth is most assuredly not in the same position to implement the suggested recommendations as is a school not facing such problems.

- Ignoring consequences which could be negative or counterproductive. Regulatory changes that involve the immediate -- rather than gradual -- increase of graduation course requirements and/or grade point averages for participation in extracurricular activities, could, for

example, result in higher drop-out rates of students unable to meet the new requirements.[9] Unless the problem of teacher shortages is addressed prior to increased course requirements, requiring additional courses for graduation could also result in the use of unqualified teachers, larger class size, students placed in classes inappropriate for their level of mastery of the material, etc.

- Creating the illusion of change. A number of policy-related changes designed to respond to recent recommendations are particularly likely to result in only illusory school improvement. Raising the graduation requirements from three to four years of English, for example, without improving the content and instruction in such classes, only gives the impression of improving the level of educational attainment. It is unlikely that students who did not learn English in three years will suddenly become experts with a fourth year of "more of the same." Similar illusions of improved education are likely to be created by extending the school day and/or year when such actions are not accompanied by substantial changes in what actually occurs in the classroom.

- Derailing existing improvement efforts. A substantial number of schools, districts, and states were in the midst of their own school improvement efforts at the time the Commission on Excellence set into motion the national call for excellence. There is evidence to suggest that rather than incorporating the Commission's recommendations into existing improvement plans, energies were redirected to create new efforts in response to public presssure generated by the reports. Well planned efforts were weakened or even lost in the redirection.

- Counteracting (or losing) gains made in other educational areas. There is considerable concern that the recent push for excellence will result in ignoring other priorities in education, particularly equity. Although almost all the commissions, task forces, and study authors have mentioned the importance of educating "all" students, the concern is clearly with achieving excellence. Contrary to the apparent attitude of the current administration in Washington, a strong argument can be made that equity and excellence are inclusive rather than exclusive concepts. However, there is evidence to suggest that the emphasis on excellence can be used to produce budget and policy decisions which endanger the gains made toward achieving educational equity.

- Channeling scarce dollars to high visibility, high cost initiatives with little evidence of effectiveness. In a survey of 28 school districts throughout the country, the American Association of School Administrators (1983) found that to implement only two of the Commission's recommendations -- market-sensitive teachers' salaries and longer school day (7 hours) and year (200 days) -- would require the addition of $591 million to the 28 districts' $2,194 million combined budgets. Odden (1984) estimates that

the cost of extending the school day from 6.5 to 8 hours would be in excess of $20 billion, as would lengthening the school year from 180 to 220 days -- a $40 billion price tag for one recommendation, with little evidence, as Odden points out, to support the claim that education will even improve as a result.

- Redirecting energy away from what we know works in improving schools to focus on politically sensitive rhetoric. The rush to react to political and public pressure for excellence has pushed particularly state legislatures to enact measures which do not appear to have benefited from what research has taught about how to achieve lasting school improvement. Unfortunately, the presentation and discussion of most of the commission and task force reports of educational problems and the solutions proposed to resolve them enhances this climate of benign neglect of research, channeling attention away from what is known about school improvement to focus more on opinion and rhetoric.

This latter negative aspect of commissions and task forces is of particular concern since research on school improvement has reached a level of sophistication where a substantial amount is understood about how and in what ways schools can raise the quality of the education they provide. In the following two papers, Cox, Loucks-Horsley, and Crandall will discuss the factors which have been shown to influence the success or failure of school improvement efforts and the ways in which school officials can move beyond the rhetoric to what is really important -- improving schools and raising the quality of education they provide.

Notes

[1]See, for example, David P. Crandall and Associates. People, policies, and practices: Examining the chain of school improvement, Volumes I-X. Andover, MA: The NETWORK, Inc., 1982.

[2]The reports and books that are referred to throughout the article include:

- A Nation at Risk, National Commission on Excellence in Education;
- Action for Excellence, Task Force on Education for Economic Growth, Education Commission of the States;
- Academic Preparation for College, Educational Equality Project, The College Board;
- Educating America for the 21st Century, National Science Board, Commission on Precollege Education in Mathematics, Science and Technology;
- Making the Grade, The Twentieth Century Fund Task Force on Federal Elementary and Secondary Education Policy;
- High School: A Report on Secondary Schooling in America, Ernest Boyer, The Carnegie Foundation for the Advancement of Teaching;
- The Paideia Proposal, Mortimer Adler;
- A Place Called Schoool, John Goodlad; and
- Horace's Compromise, The Dilemma of the American High School, Theodore Sizer.

The primary emphasis, however, is on task force and commission reports rather than research-based (Boyer, Goodlad, Sizer) and theoretical (Adler) books. These latter books have gone well beyond the often superficial discussion of education found in many commission and task force reports to paint capitivating portraits of the complex nature of schooling and creatively explore alternative educational possibilities.

[3]See, for example, Sara Lake. The educator's digest of reform: A comparision of 16 recent proposals for improving America's schools. Redwood City, CA: San Mateo County Office of Education, 1984; K. Forbis Jordan. Comparison of recommendations from selected education reform reports. Washington, DC: Congressional Research Service, Library of Congress, 1983.

[4]As Harold Howe (1983) has pointed out, "all the recent reports and studies recognize in general terms that disadvantaged and minority students have special needs, but they all stop with such generalities" (p. 171).

Unfortunately, educational equity concerns are given almost no attention by the majority of commission and task force reports. In some instances, the mention of equity issues gives the impression of being more taken in nature than sincere.

[5]This recommendation involves seven "sub" recommendations concerning teacher preparation and the teaching profession. See A Nation at Risk (1983), pp. 30-31.

[6]Peterson focused on the six reports issued by the National Commission on Excellence in Education, Education Commission of the States, Business-Higher Education Forum, Twentieth Century Fund, Carnegie Foundation for the Advancement of Teaching, and National Science Board.

[7]These constraints or "realities" -- realities which many, though not all, the reports ignored -- define the context in which the recommendations are to be implemented, determining at least in part, if not entirely, the appropriateness and feasibilily of the changes required by the various recommendations.

[8]Estimates of state-level commissions continue to expand each month.

[9]According to Howe (1983), "one of the dangers inherent in all the recommendations for more demanding courses and higher standards is that these more rigorous requirements will be insensitively applied and will force more young people out of school altogether . . . It is possible to raise academic standards in high schools without rejecting large numbers of young people, but the difficulties of doing so are insufficiently recognized in many of the new reports" (p. 172).

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IT'S ALL IN THE DOING: WHAT RECENT RESEARCH SAYS ABOUT IMPLEMENTATION

Susan Loucks-Horsley
Pat L. Cox

Prologue

It was nearly midnight. The superintendent of a large midwestern school district finished the final section of the National Science Board Precollege Commission report and put it on the stack of other commission studies. In the preceding weeks, she had read through at least ten similar documents. The superintendent would have read these eventually anyway, in the course of professional reading, but the telephone in the district office had been ringing off the hook recently: community people, including the local newspaper and television station, were wanting to know what action she was going to take, based on the reports. What was she actually going to do to improve the district's educational services?

The superintendent ruffled through the copious notes she had taken listing the recommendations of the various studies. The "what" of these reports seemed pretty clear -- increase graduation requirements, upgrade curricula, etc. But the "how" was not much addressed. Sitting next to the superintendent's pile of education commission reports was an equally high stack of studies describing recent research on the implementation of school improvement. The superintendent monitored such research, finding it helpful in executing district improvement efforts. She was irritated that the recent commission reports and studies had not really addressed the topic of how to go about translating their recommendations into action using this research.

The superintendent was a savvy educator who had seen several waves of reforms beginning with her experience as a young biology teacher in the 1950s when changes in science and mathematics were being urged. She knew that the reports of study groups, however wide-ranging, constitute only a start. In fact, having been associated with change efforts through her entire career, the superintendent had come to think of commission studies and other attention-focusing devices as forming the tip of an iceberg called school improvement. Most people, policy-makers and practitioners alike, concentrate on the small portion above the surface -- the public, political acts of agenda setting and policy making -- whereas ninety-eight percent of a school improvement effort -- the hard part of effecting real change in classrooms -- lies hidden. Many well-intentioned reforms have run aground because their formulators did not plan the "doing" of change.

The superintendent knew that her task and that of others in her district was to fit the recommendations to the needs of the district, not the other way around, despite pressures to act quickly. Moreover, since the district was already engaged in school improvement activities, she and others had to ensure that

attention was not diverted from these ongoing efforts. She cleared her desk and headed off for a much needed rest before heading into the district office for another week. That night, she dreamed that she was the captain of a freighter steaming across a northern ocean filled with icebergs -- and each one was a recommendation for improving American education.

Implementation Considerations: The "What," "How," and "Who" of School Improvement

While the superintendent's dream (or nightmare?) was, of course, fantasy, the image it presents is nevertheless an accurate one. Each recommendation from the many reports and studies is, in fact, the tip of an iceberg, with implementation considerations looming below the surface. As countless educators across the nation are launching headlong into frenzied efforts to "do something" based on the various commission recommendations, many are forgetting -- if they knew -- that knowledge on how to implement change exists. It is as though they are sailing in the night, without radar, and with no understanding of the peril of moving ice in the open ocean. In earlier eras of reform, there was no body of knowledge regarding the implementation of change: educators were indeed traveling in uncharted waters. Now, however, researchers and practitioners have formulated an understanding of school improvement that, if used, can help prevent another round of Titanic-like disasters.

In this paper, we describe the iceberg that is school improvement, acknowledging the tip, then shifting attention to the considerable part underneath that has to do with the fitting of recommendations to particular settings -- the implementation of actual change. Our discussion is based on recently completed research that examined the processes of school improvement in 146 schools across the country (Crandall and Associates, 1982). The findings from this study corroborate and extend the conclusions of other recent investigations of change in schools.

We focus on three considerations having to do with school improvement:

- defining what is to be done in a particular setting;
- designing and conducting activities to support the change process;
- differentiating the variety of roles individuals can and must play in an improvement effort.

Defining the "What" of School Improvement

The various commission reports are a rich smorgasbord of educational improvement suggestions. Like all smorgasbords, however, the reports make it all too easy to pile up one's plate in the excitement of picking and choosing only to find that 1) many of the individual items are not particularly appropriate;

2) there is too much of one thing and not enough of another; 3) there's too much to eat; and/or 4) being overwhelmed by the sheer magnitude, one has lost appetite altogether.

In the face of all this, it takes considerable will power on the part of educators to remember that it is impossible to do everything or even many things. Research and experience clearly point out that tackling too much often results in no one thing being implemented successfully (Hall, 1978; Smith & Keith, 1971). Implementation of change in organizations requires selecting one or two things at a time on which to focus energy and commitment.

This is especially true if there are already ongoing improvement efforts in the district or school. Given the highly exposed nature of education at all levels, educators are vulnerable to the shifting winds of educational fashion. The individuals who must do the real work of change -- teachers and school-based administrators -- soon learn to pay lip service to fads that come and go in rapid succession. The message here is: rank the recommendations and choose only the top one or two to implement.

But how to rank? This is a question that can be answered only by reference to a particular setting. The choice of a particular school improvement effort must be based on the needs of the particular setting in which it is to be implemented. Because change is a difficult, unsettling experience for all concerned, those planning school improvement efforts must take care to diagnose the situations that most warrent improvement. Just because a commission report or study -- or even several at once -- point to a certain need in "American schools," it doesn't mean that any one particular school has a need in that area. Sometimes, even if a need exists, it is better to work in a related area where there is already interest and enthusiasm; the "unfreezing" of people's behaviors and routines may then contribute to more concentrated focus on the need itself. With regard to the commission recommendations, then, educators in a particular setting must take care to choose for implementation those one or two recommendations that most address their specific needs.

But what do we mean when we talk about an "area of need" or a "school improvement?" To most effectively achieve change, both the area for attack and the new program, practice, arrangement or process that will be used in the attack must have impact on teaching behaviors. Recent research has indicated that change efforts of a general nature don't appear to have much impact on educational organizations (Louis & Rosenblum, 1981). For example, change efforts which focus on planning and problem solving with less concern about what is done as a result, have little influence on the ongoing life of the classroom. Research does suggest that change can occur and "capacity" can be built through concentration on a specific practice that is instructional or curricular (Huberman & Crandall, 1982). If a practice is not chosen that has impact on the classroom in some way, then there can be no change

in ultimate outcomes, increased student achievement, for example. This is why merely lengthening the school day (increasing graduation requirements, etc.) -- as some of the task forces and commissions have suggested -- is not an answer in and of itself. Indeed, most of the commission and study recommendations do not refer to the classroom at all and those that do are of a sufficiently general nature that they cannot be implemented without further delineation. Take, for example, the recommendation that time on task be increased. An educator attempting to implement that suggestion would, we hope, ask the question, "increase time on what task?"

Such a question is a practice-related query, one that begins to get at the nuts-and-bolts of classroom change. Developing or selecting a new practice, course, program or process that will change what goes on in the classroom is an important step -- one that requires careful thought and sufficient resources. Research has indicated that "importing" practices that have been used successfully in other settings is an effective strategy -- as long as they "fit" well with the student population, resources available, and educational philosophy of the adopting school (Crandall & Loucks, 1983; Emrick, Peterson & Agarwala-Rogers, 1977; Louis & Rosenblum, 1981). Also, this strategy is clearly more cost-effective than developing one from "scratch." And if the selection is made from the numerous state and federal pools of validated and promising practices (such as the National Diffusion Network and state diffusion programs), there is a greater likelihood that the hoped-for outcomes will occur and the potential pitfalls will be avoided.

Whether imported or locally developed, it is important that the change to be made be specified and well defined in behavioral terms so that all participants can see what is involved (Loucks & Crandall, 1982). This means specifying not only the ultimate outcomes, but also the interim outcomes -- e.g., the changes that will occur in the teachers' behavior. These we call implementation outcomes. When that is done, those involved can judge progress towards both implementation outcomes and ultimate outcomes. It makes everyone's job more manageable, teachers and administrators alike, because everyone knows what the practice looks like.

With a specific, well defined practice in mind, it is possible to scrutinize current practice in a school or other setting and understand how much change will be required to implement the new one. Different settings and different teachers within them will have to change in varying amounts to implement a particular new practice, depending on how much it differs from their current practice. Recent research has concluded that different implementation strategies are appropriate for individuals who must change a lot to implement a new practice compared to those for whom a new practice represents only a minor change (Bauchner, Eiseman, Cox, & Schmidt, 1982). (More about these strategies later.) Other, non-classroom procedures may also have to change

as a result of the implementation of a new practice, but these shifts will be driven by classroom needs rather than the other way around as is often the case.

While deciding on an area of need to work on, and selecting and specifying the practice to be used to meet that need, are both critically important, the job is by no means complete. The most magnificent program can be wasted if careful consideration is not given to how it is introduced and maintained. The next section discusses the "how" of school improvement.

Consideration Of The Change Process: The "How" of School Improvement

Every recommendation of the various reports and commissions will require changes to be made -- sometimes in materials or curricula, sometimes in strategies and behaviors, sometimes in organizational arrangements and structures, and other times in policies and regulations. Regardless of the type of change to be made, the people and organizations making them will undergo a change process. In the past, particularly in large-scale reform movements, but also in periods of smaller-scale innovation, such changes have been approached as "events." Announcements of new mandates, delivery of new sets of materials, decisions to implement a new program -- often these happenings were seen as the change. And just as often they failed to make any difference in schools.

As a result of these early failures, researchers and practitioners alike know that change is a process rather than an event. It takes time to change behaviors, procedures, attitudes; to reorganize roles and responsibilities; and to create the materials, approaches, and resources. Further, it requires a complex array of activities, interactions and people to succeed in an improvement effort that is more than putting a "new name on an old bottle."

The change process has several phases; some of these get ignored in the fervor of reform. Although every change researcher and theorist has his or her own nomenclature for these phases, a basic set would be: initiation/adoption, implementation, and institutionalization. At each phase, the organizations and individuals involved have different needs and concerns (Hall & Loucks, 1978; Huberman & Miles, 1984). The dominant questions are:

Initiation Phase:	What should we/I do? What will it look like? What will it mean for me/us?
Implementation Phase:	How do we/I do it? Will I/we ever get it to work smoothly?
Institutionalization Phase:	How do I/we insure that it will "stick"?

It makes sense then, and research confirms, that each phase requires different actions, activities, and arrangements (Loucks & Zigarmi, 1981). In planning and then in actually implementing the changes motivated by the commission reports and studies of schools, attention (time, resources, focus) must be given to each stage, or nothing will be different after the furor dies down.

The Initiation Phase. In early research on change and innovation -- and in early efforts to reform education -- a great deal of emphasis was placed on the initiation/adoption phase. Getting the right people involved, having appropriate planning and problem-solving sessions, and selecting the correct solutions were the activities most relied on during this phase. Activity stopped (as did the research focus) when the decision was made to adopt a given program or solution.

Clearly there is much to be done during the Initiation phase. Figure 1 lists many of these activities (as well as those for other phases). As we discussed in the last section, developing a clear image of what will happen is critical -- both in the planning and support of the change, and, most importantly, in the classroom. This image needs to be translated into clear expectations for individual behavior (of teachers and administrators alike), and declared or at minimum verified by someone with authority such as the principal or superintendent.

Many "school improvement" projects today spend most of their time and energy on this initiation phase -- and most of that on developing commitment through lots of group meetings attended by everyone who is to be involved. Current research indicates that this could be a costly mistake (Huberman & Crandall, 1982; Louis & Rosenblum, 1981). While having more than one role group involved in planning and thinking carefully about what to do are both important, it is not necessary to have everyone involved, nor is it smart to sink all the resources and energy into these "front-end" activities. We are appalled at one school improvement program sponsored by a state that takes fully two years before anything new is introduced into the classroom. By the time that happens, teachers and administrators tell us they hardly care (i.e., there is no energy left for the change itself). Further, our research indicates that commitment can and does build rapidly and deeply when a new practice is tried in a classroom and benefits to students are apparent (Huberman & Miles, 1982). Teachers and administrators alike become excited and committed to successful programs that they see helping them do their jobs better. Sitting in meetings trying to activate enthusiasm is much less effective. Actually doing something works.

The Implementation Phase. Implementation research is more recent than that of the earlier Initiation phase. When the Rand Corporation's Federal Change Agent Studies (Berman & McLaughlin, 1975; 1978) reported that certain federally supported demonstration programs were failing to result in long-lasting changes in schools, one major failing they pointed out was the lack of attention and emphasis given to the implementation phase

of the change process. Along with other researchers (Charters & Jones, 1973; Hall & Loucks, 1977), they painted scenario after scenario of innovative ideas being developed and never being implemented -- or being implemented in such a superficial way that no real change occurred. The importance of implementation became the focus of continued research and experiments by practitioners, as training and support systems were developed to prepare and then nurture use of new programs by participants.

As a result, we have learned some very important things about how to make implementation successful. To actually "do" something begins with learning the behaviors and tasks required by the new program or practice. Thus, if one looks again at Figure 1, training heads the list of implementation activities. But note that the list is longer than the often one-shot, hit-and-run workshops that are standard fare for some schools. Teachers and administrators can get energized and even learn some new behaviors during a good training workshop, but when they go back to the reality of their day-to-day, minute-to-minute jobs, they need help and encouragement in trying out the new behaviors and integrating them into their routines.

After this has happened, the outcomes of the practice can and should be evaluated: to what extent are people doing what the practice requires? and what is the effect on the learner? Asking the first question is a prerequisite, and should precede by about a year, any effort to answer the second question. Otherwise, it will not be at all clear what any learner outcomes that are discovered can be attributed to; and measuring those outcomes prematurely will only show the effects of initial, uncoordinated, inefficient use -- most likely a dismal picture.

The Institutionalization Phase. Most school improvement efforts congratulate themselves if they end with a careful evaluation. But, research tells us that they're fooling themselves if they think that even glowing evaluation results will mean the program is there to stay.

More recent research studies have shown a trend in successful implementation by schools who paid attention to implementation (Emrick, Peterson & Agarwala-Rogers, 1977; Loucks & Melle, 1980; Louis & Rosenblum, 1981). But as the mysteries of implementation have became better understood, research discovered perfectly implemented programs that were there one year and gone the next. Consideration of the phenomenon of institutionalization was found to be important, especially if the goal was long-term, lasting improvement. The last few years have shown some preliminary understanding of the concept of institutionalization (Miles, 1983; Yin, 1978).

All the ways to ensure institutionalization have not as yet been discovered, but doing the activities listed in Figure 1 help. Securing institutional support, and designating (but not putting full reliance on) a person to be responsible for the maintenance of the program, are vital to successful continuation. While

others turn their attention back to the list of lower priority items from the commission reports and studies, someone is there "minding the store."

Putting It All Together. Understanding of this multi-phased change process can therefore lend guidance to those seeking to implement the recommendations of the various reports and studies. The activities listed in Figure 1 all need to take place. Research confirms that activities in each of the phases are necessary but not sufficient to successful improvement (Crandall and Associates, 1982). This means that:

- changing graduation requirements to essentially double the amount of science taken by the "average" high school student necessitates more than a change in written policy. It also requires careful development or selection of courses to meet the needs of the kinds of students who had not enrolled previously; training of teachers in new behaviors required by the courses and the new kinds of students; and an ongoing support system to meet teachers' need and resupply their storage closets.

- Increasing the quantity and quality of student "time on task" requires more than an inservice workshop. Other required activities might include: helping teachers assess their use of time before a workshop takes place; the selection of a practice which ensures more instructional time by introducing new management and teaching strategies; coaching in classrooms after workshops; and monitoring use of the practice on an ongoing basis.

- And "school improvement projects" that focus primarily on needs assessment, planning, and problem-solving are far too heavy on the "front-end," ignoring or down-playing much of the "back-end" activity needed to change practice and keep it changed. They need to strongly consider paring down activities in the Initiation phase, and adding many in the other phases.

The fact is that schools desiring to implement an improvement of any significance at all need to budget time and resources for a long haul. Acknowledging the multiple stages and activities involved in change is the only way improvement will occur.

Different Roles and Functions: The "Who" of School Improvement

If there is so much to be done to make improvements in schools, who will do it? The research on school improvement is clear: there are functions for everyone who holds a role in the education enterprise, from teachers to policy-makers. This departs somewhat from the commission and study findings, which seem to fault only teachers and administrators (usually building level) for not doing their jobs well. In school improvement everyone is needed.

We believe that it is more useful to think first of what is to be done, and then of who is the best person to carry it out. In some cases the building principal or central office administrator is in the best position to perform a certain function; in other cases, the best person is dictated by the individual situation.

Figure 1 lists most of the functions or activities that must be carried out in a school improvement effort. Every school district has many people to pick from to take primary responsibility for each function: teachers, building administrators, central office instructional staff (curriculum coordinators, staff developers), central office administrators (superintendent, associate superintendent), external consultants or trainers.

As noted above, school improvement research indicates that there are some functions that had best be carried out by people in particular roles (Cox, 1983; Fullan, 1982). For example, a central office instructional staff member, designated as the facilitator or coordinator of an improvement effort, is often in the best position to create awareness, coordinate planning, allocate resources, arrange training, help teachers plan implementation, problem-solve and trouble-shoot, and plan for continuation of the new program. A person at this level often has the resources, the expertise, and the time to attend to such details.

As noted earlier, the focus on a new curriculum or instructional strategy as a vehicle for improvement can mean importing one that has found success in other settings. Thus, there is clearly a role for an external consultant or trainer, someone who can prepare teachers and administrators to use and support the use of the new practice (Cox & Havelock, 1982; Emrick & Peterson, 1978). Conducting initial and follow-up training, with the assistance of the central office coordinator, the external trainer can make an important contribution to an improvement effort.

While central office instructional staff and external consultants can handle the "content" required by a change effort, administrators at both the building and district levels have responsibility for creating and maintaining direction, impetus, incentives and rewards. Exercising "forceful leadership," they must set clear expectations as to what is to be done by whom with what effect (Huberman & Crandall, 1982). Their attention to the improvement effort must be continuous and obvious -- from involvement with planning and selection of what to implement, through supporting institutionalization.

Note that we have not designated the principal as the key to school improvement, as do many of the new studies. We have seen situations where principals were totally inert while major changes occurred in classrooms, resulting in significantly more learning by students. While research has never reported successful improvement where the principal has opposed a change, principals do not have to be the key players. They have important roles, but

FIGURE 1

Necessary Activities for the
Phases of School Improvement

Initiation Phase

Assessing needs, strengths, and resources
Assessing current practice
Setting clear goals, objectives, and expectations
Selecting or developing a new practice
Creating awareness
Assigning roles and responsibilities
Establishing commitment
Developing game plans
Allocating resources
Providing materials
Arranging training
Making schedule and organizational changes in school
Helping teachers plan implementation

Implementation Phase

Initial training
Problem-solving and trouble-shooting
Providing follow-up training
Monitoring classrooms for use
Evaluating implementation outcomes
Evaluating ultimate outcomes

Institutionalization Phase

Training new or reassigned staff
Conducting follow-up and refresher sessions
Incorporating program into curriculum guidelines
Routinely purchasing new materials and supplies
Establishing a budget line item

others do as well. Careful assignment of responsibility can avoid anyone shouldering all of the load (or, in some cases, all of the blame for a failure).

In terms of roles and responsibilities, it is also interesting to note that nowhere in the school improvement literature is there evidence that participation by the private sector increases the potential for success. While the idea is intriguing, our observations are that such collaboration is very difficult and time-consuming. Working with the private sector may in the long run be an important feature of a strong educational system, but doing so requires considering it as one more instance of a change process. Educators and private sector personnel alike will experience the different stages of the new working relationships, and the kinds of expectations, time-frame and support described throughout this paper will need to be attended to if the process is to accomplish the hoped-for outcomes.

Summary and Implications

If the recommendations of commissions, researchers, and scholars are to truly make a difference in American education, schools must pay attention to the cumulative findings from research on school improvement. Among those things to be considered are:

1. Creating an image of what is to be accomplished that extends to and beyond the classroom, and that meets a clear and acknowledge need.

2. Focusing on a practice that brings changes at the teacher/student interface, that is, a curriculum or instructional strategy.

3. Developing a broad base of involvement and support for the effort from people at all levels of the education system.

4. Designing and conducting the improvement effort with adequate attention and resources for <u>all</u> phases of the process: initiation, implementation, and institutionalization.

What does this mean for individuals at different levels of the education system?

For <u>policy-makers</u> at the local, state, and federal levels, it means holding realistic expectations about what and how much can be done. All would agree that there just isn't enough money to do it all. We would add to that that there isn't enough time or energy to do it all. For everything that needs to be changed -- every improvement that needs to be implemented -- individuals have to go through a change process. No one is excluded; federal and state agency staff, administrators, teachers all are affected. Steps cannot be skipped. Research and experience bear out that attempting too many new efforts at one time can ensure that not even one will succeed.

But this is no reason to decrease the insistance on and pressure for improvement. As we noted above, "forceful leadership" is a success strategy: creating realistic expectations, providing adequate resources and support, and closely monitoring progress sends the clear message that "we've got to improve, and we're going to work on it together." Policy makers at all levels need to keep the mission of improvement clear, with the means to get there supported.

But often the means is the problem, especially with the current economic situation. Policy makers need to consider cost-effective measures to support needed improvements. One such measure is dissemination strategies which identify effective practices and support their use in other settings. Many states have such systems; the National Diffusion Network works this way at the national level. Other cost effective measures are technical assistance systems, administrator academies and teacher institutes (Odden, 1984). Whatever the form of the support system, such a system is absolutely necessary if policy makers are to avoid "lip service compliance" to policy mandates.

District-level administrators can also benefit from consideration of these learnings. They too need to exhibit leadership in setting clear expectations for improvement. But they need to consider the mandatory "support" in more detail. Identifying a "local facilitator" -- a person at the district level to orchestrate the effort -- and giving that person resources and "clout" is an important first step. The areas of top priority should consume primary energy. Establishing what those are -- whether computer literacy, upgraded science curricula or leadership skills for principals -- should be done first. Then, the district administrator has the responsiblity to "run interference" and protect the effort from being led astray or watered down by competing priorities.

But, while not "easy," the first part is the "easiest" for district administrators, who themselves often get distracted after the improvement effort appears underway. The job must continue, however, with regular monitoring and public statements or appearances, all to indicate that the effort is still a priority. While the substantive details may be fully the responsibility of the local facilitator, some of the public relations and commitment-maintenance must be chaired by a person with "clout."

The role of local facilitator, most often a district level curriculum or instructional staff member, was described earlier. This is the person who shoulders the implementation effort, working closely with teachers and building administrators to assure that they have the required knowledge, skills and resources, at every stage of the process. As their needs change, the local facilitator adjusts his or her support strategy, from "what do I need?" and "how do I do it?" information and workshops;

to follow-up "comfort and caring" sessions; to administrative arrangements for ongoing continuation and support (Loucks & Zacchei, 1983). To ensure success in this role, the local facilitator must have the support of district administrators, and a clear understanding with building staff of responsibilities for the different functions needed to carry out the effort.

Building administrators in this scheme are important players, but they do not have to take full responsibility for improvement, as many are pressuring them to do. They must participate in identifying needs and solutions, and in planning for how the required training, support, and rearrangements will integrate into the ongoing life of the school. Like the district administrator, the principal needs to set expectations for what staff will do and will achieve, and then behave in ways to support the words. While he or she need not function as the substantive expert, monitoring progress and calling on the local facilitator with discovered needs or ones expressed by the teachers are both important parts of the role.

Everyone who has a role or an interest in American schools can help them improve. The tip of the iceberg called school improvement has been sighted; the fervor and movement the sighting has caused has done more to motivate change than anything in the last twenty-five years. And, as never before, we have some clear outlines of the iceberg beneath the surface. While all the nooks and crannies are not known, if care is taken to use what we know about the process of school improvement, educators such as our concerned superintendent will be able to avoid reliving the costly disasters of the past.

Epilogue

Early Monday morning, the superintendent attended her first meeting of the day, a breakfast gathering of the principal and several teachers from one school in the district along with the director of curriculum from the central office. These individuals had been meeting regularly for the last few months to discuss the ongoing implementation of an exciting practice focused on developing math skills, especially in the area of problem-solving. The superintendent joined the group occasionally to hear the issues on which they were currently working and to indicate her support for their effort, which had required a lot of time and energy to get underway.

On this particular morning, the conversation centered around the teachers' need for more time in the math segment on some mornings -- the new practice required sustained concentration for a longer period than was currently scheduled. Moreover, several children were called out to band practice two mornings per week right in

the middle of the period, which disrupted the whole class. At this meeting, thanks to considerable prior work with others who would be affected by any changes, the group was able to make the shifts and rearrangements needed to solve the problem. It took careful consideration of the people involved, of the requirements of the program, and of the realities of everyday school life.

The superintendent left the meeting and went into her office, where she found a stack of telephone messages, among them another call from the local newspaper. She returned the call, and was questioned about the commission recommendations. "Among the issues we're addressing are expanding math achievement and increasing time-on-task," she replied. For more detail, she invited the reporter to get up the next Monday for an early morning breakfast meeting.....

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BUILDING AN INFRASTRUCTURE FOR INNOVATION AND IMPROVEMENT: SHORT-TERM AND LONG-TERM STRATEGIES

David P. Crandall

In the preceding papers by Harvey, Loucks-Horsley, and Cox, a review of the major findings of the recent rash of well publicized education reports and a summary of the not so well publicized reports on successful school improvement efforts have been presented. The former paint a picture of desire for reform unconnected to knowledge of how to achieve it. The challenge and the opportunity for making the connection lies before us and is, in my judgment, a special obligation for researchers concerned with research utilization and the improvement of practice.

In the pages that follow, I would like to present two complementary strategies for sustaining the necessary infrastructures to achieve first a strengthening and then a transformation of American education. The first focuses on the short run from the present to five years hence, the second beginning now and building to a culmination within the next decade. Both presume an emphasis on what we know about the how of improving schools and what we are beginning to know about the ways of transforming complex social systems through a mix of persistence, passion, politics, people, and knowledge. That the latter, knowledge, is a weak lever in this process should be acknowledged at the outset. Nonetheless, it is the one around which we all ply our trade and therefore is an appropriate focus for our part in the effort ahead.

In each strategy I will articulate the principal goal that it seeks to achieve, identify the targets for its activities, identify the beneficiaries of success, describe the vehicles which would serve as the principal devices for introducing change, suggest where the primary impetus is likely to flow from, and touch briefly on likely costs.

Strategy Number One: Bringing Up the Floor

The first scenario is decidedly short term. It anticipates that it should be possible, based on our current knowledge, to elevate the modal repertoire of pedagogical practice and instructional effects in our schools in the next five years.

It is an image that capitalizes on our past investment in educational R&D and in school improvement. It is based on what we believe is known about the current conditions of most schools, the current capabilities of most school people, and the current knowledge base about interactive approaches to improving what goes on in classrooms and school buildings. It accepts, <u>temporarily</u>, schools as they are.

Targets for the short-term strategy are conventional schools, the professionals who occupy them, and the citizens who surround them, that is, the bulk of our schools and their teachers and administrators. These are not what have been referred to in the past as innovative schools, nor are these schools that are so debilitated by the confluence of internal and external conditions that they cannot be reasonably expected to respond to anything but a massive restructuring and rebuilding of their entire enterprise. Their common characteristic, besides their conventionality, is that they are ready to consider the introduction of new ways of organizing and conducting instruction in their classrooms.

The beneficiaries of the strategy are children currently performing at the average or below average level, and teachers and administrators whose principal characteristic is that they are unremarkable in their accomplishments. It is expressly focused on bringing up the floor of student achievement and professional competence such that these individuals will have some hope of remaining viable players in an educational system that will be faced with escalating challenges for change and reform in the decade ahead.

Such a strategy is explicit about going with the energy of working with those who are ready and willing to consider alternative ways of doing business. For those who would argue that this denies assistance to the most needy, my response would be yes, it may, but they should benefit by the success of increasingly large numbers of their cohorts. Not by magic, as is so often the case, but by planful communication with them and openness to their inclusion when they deem themselves ready. For those who are not content with such a partial outcome, I can only recommend pursuing substantial additional resources which can be focused on top to bottom restaffing and reconfiguring of the most needy schools. The general strategy here presented will not suffice in revitalizing such schools and will lead only to frustration on the part of both the assisters and the assisted.

The impetus for this approach must come, in my judgment, from the current crop of part-time linkers who populate the states, practice-oriented researchers, most especially those housed in regional laboratories, and various other change agents who are spurred to action and drawn to the endeavor by the protective umbrella of exhortative excellence rhetoric currently being hoisted across the country.

The principal vehicles for this approach are what have come to be known as "proven practices." These are typically but not always classroom level instructional practices. Their distinguishing characteristics are:

- There is a substantial degree of specification as to their particulars in action, that is, what various components look like when enacted as well as some judgment about acceptable variations.

- An above average amount of credible information about their relative effectiveness exists, usually the results of a somewhat conventional evaluation.

- There is confirmation of effectiveness and relevance to current pressing needs by some professionally credible and obstensibly objective quality control procedure. Perhaps the most well known of these is the federally sponsored Joint Dissemination Review Panel (JDRP). Since 1972, the JDRP has routinely reviewed submissions from school districts and others who assert that they have an instructional offering worthy of validation based on its effectiveness in meeting its objectives, usually those related to student attitude, attendance, and/or achievement. Although the panel and its procedures have been criticized on many grounds, it represents the most viable current mechanism short of the market place. Such a device is clearly appropriate for jurying practices that by their nature are fundamentally artistic creations cloaked in scientific costumes.

- The practices are not simply collections of materials but are represented by people who either have had the direct experience of developing the successful practice or have been sufficiently involved in similar efforts in schools as to be credible to the typical teacher. Seasoned observers note that the most successful among these individuals carry a certain charisma which, coupled with the calibre of their alternative offering, energizes typical teachers to set forth on voyages of improvement with few guarantees of success.

- These practices are usually based more on accumulated craft knowledge than discernible research knowledge. The unfortunate fact of the matter is that the research community still has a long way to go in terms of converting the fruits of its labors into drinkable wine for the workers who populate the vineyards called schools. The transformations of knowledge necessary to produce a usable classroom practice are multiple, difficult but not impossible to achieve. The fact remains that the current state of the art is dominated by practitioner-developed innovations that have as their principal characteristics that they are concrete, classroom-friendly (that is, congenial to typical teachers and insertable in typical classrooms), and they are packaged in ways that make them accessible with a minimum of fuss and extra expense.

- These practices and their representatives are typically part of state or national networks that include linkers or facilitators who are ongoing partners with the purveyors of particular practices in the introduction and implementation process. These facilitators serve a critical function in alerting schools in their service area to the availability of an array of alternatives and when functioning at their best, assist school people in the consideration of those

alternatives that might be brought into service to alleviate a priority which has crystallized or been identified in some more rational fashion. The external facilitators find internal partners inside the districts. These inside players, who are critical to the success of their cooperative ventures, are curriculum coordinators, assistant superintendents for instruction, an odd principal or two, and in the smaller districts the superintendent him or herself. Such people are the scanners, mappers, and matchers of priorities with solutions and of demands or talent with laboratories of opportunity.[1]

The focus for endeavors such as these are individual schools and the classrooms within them which have been legitimized in their endeavors by unequivocal leadership at the district level. The challenge for the players within the system and without is to take the success of an innovation in a single or several classrooms and work to accumulate it upwards in such a fashion that the entire school is elevated to a new level of accomplishment. Proven practices exist in adequate numbers in all the basic skills to accomplish this over a two to five year time period.

Support Necessary for Sustaining a Short-Term Strategy

The approach noted above could be characterized as modified RD&D (Blakey et al., 1983) or, more appropriate in my view, humaneering. It is an approach that is expressly aware of the centrality of people in the process of change, the idiocyncracy of circumstances and conditions in any one locale, and the importance of serendipity to success, be it of students or schools. It is an approach that attempts to consolidate the best that we know about how to improve conventional practice and capitalize on the tremendous investment in innovation made in the past twenty years. The approach accommodates lots of workable ways versus one best way. It will be pursued by a loose federation of improvement-oriented actors. This approach allows those whose leit motif has been the effective schools research to proceed side by side with those who favor a diffusion of exemplary practices strategy, asking only that the former spend some time translating their alleged successes into concrete and actionable forms so that they may be more readily considered and attempted by others. The supports necessary to sustain this approach over the next five years include the following:

[1] These characteristics are more fully described by Loucks-Horsley and Cox (1984) and Crandall and Associates (1982).

- It is imperative that the call for improvement be sustained at all levels within the broad profession known as education. Whatever his blindspots and ideologically derived inanities and explicit actions (belying his words) to cut back the importance of education nationally, the President has done the field a service by helping move the subject of schools and their improvement to the front page. Secretary Bell has been a tireless and adroit advocate for improvement even if his emphases seem misplaced and often naïve. Governors and legislatures that have moved to supply resources even if often for the wrong activities are to be applauded -- applauded for doing something, not applauded for the particulars of what they do. A window of opportunity has been opened that the profession and those who seek to populate and improve it must move through with vigor. Rhetorical leadership is needed to keep the window open long enough for progress to be discerned and longer term efforts begun.

- Policies must be put in place fostering improvement of practice through the implementation of viable proven alternatives. School boards must be educated by their superintendents as to the folly of simply adjusting standards without taking concrete steps to improve classroom instruction. As many observers have noted before, more of the same will not represent improvement.

- Districts must supply incentives for those who can find and introduce new practices. This means legitimizing the activities of those in the central office or elsewhere who should be scanning the environment for alternative approaches to the priorities that have percolated up and crystallized in a given district. Matching these to the readiness and reality of individual schools is the other half of their job that should be rewarded. Similarly, attention should be paid to developing intangible professional incentives for teachers to take the risk and make the effort of trying something new in their classrooms while the protracted deliberations regarding increased teacher pay and/or career ladders play out.

- Leadership training for principals must be intensified. It is clear that the school is the appropriate focus for these or any improvement efforts. The principal is in a key position eventually to provide the within-building leadership necessary to make a long term difference. Unfortunately, most do not now possess the requisite skills to support instructional change. Firm but friendly procedures for upgrading skills should be introduced. Those who progress should be rewarded; those who cannot make the grade should, after a reasonable period of time, be replaced.

- Search and seizure operations should be mounted. Processes for sweeping the environment for candidate practices and shepherding them through review procedures are becoming increasingly effective and efficient. These efforts should be continued and expanded at the local, state, regional, and national level. In the years ahead it seems obvious that the sweep should not be restricted simply to the best of local practice in public schools. Many practices worthy of emulation are being acted out in private schools, although as a practical matter one might not be too optimistic about finding readily transferable practices in the more selective independent schools. Their conditions are believed to be so dramatically different from those of public schools that knee-jerk rejection of their practice suggestions seems assured. The same reaction is not so inevitable with parochial schools and others with a student population more like that of the typical public school.

- Quality control procedures must be expanded. The mechanisms currently in place can be adjusted fairly readily both to accommodate more diverse perspectives in judging the worthiness of a particular practice and in setting in place a staging procedure such that the drastic funneling which now occurs is attenuated. Many practices suggest themselves as "promising" even if they are not at any given moment able to demonstrate believable evaluation confirmation. I believe that at minimum this nearly-ready condition should be legitimized. Perhaps the careful evaluation of such practices, identified at state or national level, can be subsidized so that the pool of validated projects could grow more quickly.

- Gaps in available practices should be filled posthaste. While the offerings in the basic skills seem more than adequate, searches to date have not been quite so successful in some other areas, i.e., science, bilingual education, and the emerging computer literacy. In these areas focused development efforts involving teams of practitioners and practice-oriented R&D types should be sponsored. Some of these needs may be localized and are not of the sort as to warrant the federal investment. Others are more clearly related to either the national interest or are a by-product of other national policies (i.e., immigration) and so can reasonably expect to call upon the federal dollars.

- Schools must be supplied with assistance both with respect to innovation awareness and more importantly, implementation assistance. There can be no question at this point that most schools must be stimulated by some congenial outsider to consider an array of alternatives. The prototypes for doing this successfully are operating in some states (e.g., Michigan and Illinois) and display themselves most prominently nationally through the efforts of the National Diffusion Network (NDN). The tripartite partnerships that emerge from

the coming together of facilitators with project advocates and local personnel committed to considering and implementing proven innovations bears continued support and modest expansion consistent with available resources. It is my belief that educational improvement is a national imperative and that this aspect of our infrastructure must be sustained on an interstate basis. Therefore continued federal help is mandatory. Of course these individuals are themselves analogous to school people in that they too need ongoing support and professional development to maintain their abilities and to hone their skills. Resources for such assistance must be supplied if the larger enterprise is to avoid stagnation.

The Role of Research in the Short-Term Strategy

One would hope we could mobilize to study an emerging phenomenon before it has run its course. The scenario outlined above virtually screams for focused engagement and longitudinal study. Possibilities include the following:

- Participate as a facilitator/participant in specially organized reflection/conception events. The image here is that there will be, as there are now, large numbers of local action teams who will have been activated by some combination of internal and external stimuli. Their focus on improvement will represent a change in practice for the typical school which is concerned more with maintenance than change. They are not likely to engage in much reflection upon their own events unless the opportunity is concretely presented and structured. A research-trained individual can help organize this process, help the local group to express their successes and aha's to a larger public, organize celebrations and improve connections with those who are all too often seen as occupying distant academic institutions far removed from and unconcerned with local realities. Guiding practitioners through a process that will help them to understand their experience and documenting the journeys taken together would be a most valuable contribution from the research community.

- Experiment with transforming knowledge. The suggestion is that one choose a finding or cluster of findings and/or what is believed to be a problem or priority area for schools and attempt to convert the finding into an actionable form. This exercise and the documentation of the effort would fill an important gap in our current knowledge.

- Help sniff out the pedagogical pros who may populate the schools in a particular area. They are among the sources of alternatives which could be brought to the attention of local facilitators who should be increasingly receptive to learning about good people either in their district or a neighboring district.

- Explore the character of craft competence. Though much has been written about the realities of the teacher (Lortie, 1975; Jackson, 1968) relatively little has been done to formulate a new conception of how teachers increase their competence once in a classroom situation. [See Huberman (1980) for a provocative treatment of how teachers make use of knowledge.] We badly need more detailed understandings of the phenomena if we are to be planful in future efforts to train or retrain instructional personnel.

- Monitor the entire enterprise, be it at a local, state or national level. The activities set off by the policy initiatives of the last few years offer fertile ground for investigation. My prediction for most is that the story will be one of disappointment, of policy directives not implemented, of standards set but not attained, of teachers who were provoked but not supported, and of publics who act more forcefully than they have to reject schools as we have known them. Alternatively and more optimistically, the enterprises which are underway and which may expand consistent with the strategy described above need to be captured so that our accomplishments do not go unrecognized.

Costs of Implementation

In closing the discussion of a short-term strategy, let me touch briefly on the matter of costs. The amount of federal money currently being directed to improvement-related activities is probably less than fifty million dollars. This figure represents the combined totals of the major efforts of the NIE labs and centers, the National Diffusion Network, and the few categorically related programs that seriously attempt to focus directly on schools. As of just a few years ago, there were virtually no identifiable state-based efforts focused directly on classroom improvement. In my judgment, if approximately twenty-five million dollars of federal money were focused on this effort in the near term, with increases to accommodate any future inflation, we could go a long ways in achieving the overall goal. It is not inconceivable to imagine a circumstance where states would be offered the incentive of matching this amount in such a way as to double their available pot. I believe that at least 50% of the dollars allocated to support of labs and centers should, over the next five years, be directed towards such relatively rapid, attainable, and accountable alterations in the current system of education. Such a redirection of effort, when joined with that of other efforts such as the NDN, would enhance the critical mass of professionals who have a stake in bringing schools to some minimum level of accomplishment. These same individuals would therefore constitute a strengthened constituency for the sustaining of this strategy as well as advocating investments in more transformational strategies such as those to be described shortly. To do otherwise under the circumstances seems misguided if not unconscionable.

Having described a strategy that begins where we are in terms of our knowledge of change and where schools are in terms of their ability and probability of changing, we turn now to a longer-term strategy that is directed toward creating a dramatically different educational enterprise.

Strategy Number Two: The Scenario for Transforming the Educational Enterprise

Earlier we lamented the inattention to the how of school improvement. We attempted to bridge that gap in the preceding pages. However, our discussion does not deal much with transforming the system in major ways. Yet there is an emerging consensus that such a transformation is imperative. The discussion in the general press calls for dramatic change if the country is to retain its primacy in the world. The most common argument revolves around the economy and America's position in the international marketplace. We are treated to half-baked comparisons between our educational system and its levels of attainment and those of Japan, West Germany, the Soviet Union, and Scandinavia. We are reminded daily of the lamentable quality of America's manufactured products and the inappropriateness of its basic industries in the current context. [This common misperception fails to acknowledge that the U.S. has been a service economy for more than 40 years (Shelp, 1984).] Predictions are made about our move toward an information society characterized more by ideas and their transfer than products and their shipment. Our own work with employers reveals an escalating and potentially disasterous distress over the learning capabilities of both its entering workers and its current employees. Discrepancies between what employers say they are getting from the schools and what the schools believe they are supplying employers have been documented (Center for Public Resources, 1982).

Fortunately, educators who for the most part are not part of the American mainstream are also calling for radically different approaches to learning and radically different structures for supporting learning on a lifelong basis. John Goodlad (1983) refers to an "ecology of institutions;" Seymour Sarason (1984) urges a community collaboration; Rec Neibuhr (1984) is passionate in his portrayal of an emerging paradigm shift toward a learning (versus education) system that reactivates communities around a common purpose and uses media as a means of facilitating participation. George Leonard (1984) has brought the debate and his vision of the future to the popular publications of the managerial class. At virtually every recent meeting of concerned observers, frustration has been expressed with the current language that is used to describe the educational enterprise and the inappropriateness of the metaphors that are used to characterize it. We decry the collapse of community and the rise in media-transmitted pap that plays to the lowest common denominator in our society and converts the populace into increasingly mindless consumers of increasingly useless products.

It seems to me that the time is right that, simultaneous with the attempts to bring up the floor in our schools, we must mount a major effort to transform the very enterprise we are in the process of shoring up. We must acknowledge our dilemmas in producing learning and take the responsibility for expanding the boundaries of what constitutes our conception of school while narrowing the focus of its endeavors. This new investment can be justified on the grounds of national defense or international economic competition or revitalization of the democratic ideal as one chooses. Its pursuit is at least as urgent if less certain than the preceding scenario. We should convert the potentially paralyzing fear of international competition into a motivating energy that engenders alternatives to the current deteriorating situation versus circling the wagons to simply protect the old. While the bulk of the troops must be deployed to protect the present populace, the experimenters and the scouts must move into unchartered terrain to experiment with new conceptions of education and schooling and discover new vistas.

Pursuit of this goal, the testing of alternative conceptions and operational forms of school, is targeted to the innovators among us, those who are past the point of the typical school. The beneficiaries are those communities and school people that are willing to take the risks of confronting the unknown and moving into it; those willing to develop together enough near-certainties that next steps can be taken. The impetus for this activity will be a combination of federal or state initiatives with bottom-up activity from a few self-selected schools. Many of the initiatives likely will be privately funded or mounted by educational entrepreneurs. The business community is a critical player in the success of this adventure.

My own thoughts on the possible facets of such a scenario represent an initial iteration, a sketch as yet incomplete and more felt than reflected. It is not tidy, many parts are missing, many parts are unidentified. It is nothing more than a first attempt. It is driven by a belief that we must work toward a condition where life-long learning is the norm and where such learning is viewed as the collective responsibility of the community, a community reconnected and revitalized in part by its pursuit of ways to enhance and orchestrate the learning of its citizens. It assumes that the knowledge and skills needed in the workplace are likely to change in five to ten year cycles beginning now. It assumes that technologies now becoming increasingly commonplace will function as tools in the quivers of those members of our society who have learned how to learn.

Though what is imagined eventually is a transformation of the culture of our country as well as the culture of each community, the focal point remains the school, both as a culture itself and as the potential pearl-producing piece of sand in the slippery ooze of a host community.

Critics and observers of the current educational enterprise note that today's students and young workers have no sense of history, do not appreciate literature, cannot grasp the import of science and technology for their lives, demonstrate an inadequate understanding of their responsibilities and potentialities as citizens, all too often are functionally illiterate, and most of all seem incapable of engaging in the reasoning necessary to learn on their own in the face of changing realities.

The pendulum swing that provoked the press for equity has led too frequently to variations of "everyone is entitled to his or her opinion" or "every achievement is equal." Many of the champions of the shift toward excellence believe that we are paying the price of the unintended consequences of such simplistic views in today's schools. It is perhaps not surprising that the "king-has-no-clothes" aspect of this dilemma should be expressed in a popular (versus professional) publication whose author trenchantly notes:

> It is not un-American to notice that people who store up more knowledge are, well, more knowledgeable. Also, the idealistic concept that all disciplines are equal, life experience being as valuable as physics and the knowledge of street slang comparable to a knowledge of Latin, does not work for a democratic reason -- most of the people don't believe it any of the time.

We will never realize our potential as a society if we persist in making such misguided equivalencies our educational policy. We must find ways of acting out a continued commitment to equity in concert with the imperative for excellence if we are to be able to hold our heads high with our own children and in the world.

Actions Necessary for Pursuing the Long-Term Strategy

I would advocate that we begin our endeavors by creating alternative images of either "an enlightened citizen" or of "a worker who has learned how to learn." Either choice is acceptable, depending on which age group one chooses to target and one's personal tendencies, concentrated action being the imperative. I suggest that such images be created by multiple groups no larger than nine including a skilled facilitator. The groups should consist of citizens, representatives of business and industry, and educational professionals.

John Goodlad among others has spoke convincingly of the fact that most parents, and by inference most citizens, have no interest in actually running the schools. Rather, they have an interest in influencing the nature of the enterprise and having easy access to knowlege about parts of the system, i.e., their local school building. Though too many business people have been either burned

or turned off by educators' expectations that public/private partnerships are comprised of public agendas financed by private pocketbooks, I believe the cause is not entirely lost and that enough circumstances of success can be structured to attract many of the current skeptics over the long haul.

Following the creation of images, I would suggest developing teaching and learning scenarios related to them. It is important that these be unconstrained by conventional conceptions of where learning occurs, what school is, and what we can't do. Rather they should be driven by what common sense and accumulating knowledge suggest are optimal or alternative ways to provoke and encourage accelerated learning by children and adults of all sorts.

Among these new scenarios should be not only the next generation of the core curricula, i.e., history, literature, science, civic understanding and literacy, but also other integrative non-academic subjects such as health, fitness, and communication. Schools have too long dealt with only parts of the people that populate them; this transformational effort should not make the same mistake.

Many of the teaching/learning scenarios thus created can be tried out in conventional contexts by teachers who are given the latitude to operate outside of conventional agreements and constraints. Other scenarios should be collected together into new versions of schools operated by a broadly representative group that is not unduly constrained by existing physical plants. Indeed, if the guiding principle were "form following function," it is entirely likely that few facilities and certainly no new ones would be needed at all. The resources of most communities are more than adequate to the tasks imagined by most who have spent more than a few minutes thinking about alternative designs. These might take the form of what John Goodlad has called "key" experimental (exemplar) schools that are coupled with demonstration schools who are assisted in taking up the activities of the key school over time. (I should note that a whole school strategy of this sort involving experimental schools and follower schools has met with some difficulties in Holland and other European countries that have attempted it. The lessons to be learned from that experience should be vigorously pursued to avoid similar pitfalls.)

Naturally it will be necessary to secure some waivers from local and state authorities, and various unions to implement many of the alternative schools. Certification requirements would have to be relaxed, definitions of working conditions suspended, and wage schedules set aside almost entirely in order to accommodate the full range of possibilities. It seems reasonable to me to expect that one could enter into "enterprises of mutual accountability"

with authorities and/or unions that would include hold-harmless provisions, long-term time perspectives, and adequate rewards for risk taking. In the near term it would almost certainly not be everyone's cup of tea and yet I cannot imagine that there are no places that would be able to work out the necessary accommodations to experiment.

Because so much has been made of the salary deficiencies of today's teachers, this problem should be pursued head on and early. Projections suggest that today's workforce is likely to be tomorrow's workforce; assuming we want our teachers to be highly competent professionals, therefore, strategies to accommodate reasonable requests for compensation must be pursued. My own initial thought is that it would not be unreasonable to offer full time eleven month teachers in such an experimental situation a salary that would be approximately double their current wage, i.e., in the $40,000 range. My guess is that it would be possible to get local businesses to contribute 50% of this increased figure for a period of perhaps five to eight years in exchange for new evaluation and accountability procedures that were mutually developed.

One of the things business people cannot abide about educators is their tendency to fob off responsibility for evaluation to someone else or to the ubiquitous "well, that can't be evaluated given its complexity" statement. There are just as many uncertainties in many businesses, especially as the trend towards information-based enterprises continues. The arguments against evaluation schemes that have worked historically will simply not hold water in the future. Educators must acknowledge the demographics -- the percentage of taxpayers with school age children now is less than 30% and shrinking. Thus, the potential partners for new endeavors are less likely to be found among the general citizenry, however interested they may be, as among potential employers who have a stake in a quality work force.

If, as is likely, the learning (and earning!) opportunities are organized around principles of mastery, it is likely that instructional and support roles will need to be differentiated and that technology will play a major part in helping organize and monitor much of the cognitive learning that takes place. Such schools will have an opportunity to serve as community learning centers available to all members of a given locale on an easy-access basis. It would seem relatively easy to establish such learning centers and make them available six days a week to whomever was interested, be they child or adult. Further, the centers could easily be networked wherever they were located via technologies that are currently available.

One would hope that among the tools that would be explored for enhancing the ongoing involvement of the larger community and learning would be creative use of media. An increasing number of communities are currently wired for cable and could certainly take

advantage of this circumstance to organize and broadcast seminars as well as provide the stimulus for town meetings concerned with creating alternate images of schools and securing input on various approaches to supporting them. Recent experiments (cf. The Chemical People) in using television for such purposes were quite successful and offer hope that the medium can be something more than simple (minded) entertainment. There is every possibility that audio and visual media combined with computer technologies can serve to supplement face to face gatherings as facilitators of community cohesion. Testing out such notions around critical questions such as the design and conduct of education for tomorrow for all citizens should be readily saleable.

The Role of Research in the Long-Term Strategy

The place of the researcher in this scenario is fairly obvious. They can, and will, of course, need to help develop the new curriculum in concert with the alternate images that have been created. While these will inevitably be localized efforts, there is every reason to believe they would want to take advantage of the best available knowledge and talent in developing the curricular offerings. Such development efforts would probably be more informed by the recent experience with interactive R&D than with past large scale efforts which tended to isolate the academics from the implementers, not to mention the citizens, and produce some exceptionally well done but never used materials and instructional alternatives. We should be able to learn from our mistakes this time. Certainly we are talking about new experiences that are intended to transform the position of educators and schools in the society, to redefine the center for learning, and revitalize what is meant by community. All of these are worthy subjects of study over time. The new paradigms that will emerge must be articulated and communicated. In the early phases of such new design efforts, there will be needs for research on community attitudes, on employer perspectives, and on available knowledge about learning. Special attention should be given to looking outside of North America for approaches, some well-tested and many experimental, that offer tremendous promise. We should not be so chauvinistic as to think that we cannot learn from our colleagues in other countries. There is also continuing need to identify and specify procedures for identifying pedagogical and leadership talent necessary to staff and manage such new ventures. This is a practical research question of substantial import.

Costs of Implementation

With respect to likely costs, it is my view that a limited number of experiments could probably be mounted for an initial federal investment of something in the order of $2.5 million for the operational side and a comparable amount for the research side. I believe corporations and foundations could be tapped to match the dollars for the operational aspects of the endeavor. (Of course,

one can imagine an endeavor ten times as large, but I would argue that a more modest effort is more realistic since we must begin rapidly.) Over the very near future most of the activity would be devoted to organizing and planning, developing multiconstituent community-based teams, and developing procedures for operating. It does not seem unreasonable to imagine at least a hundred such endeavors being initiated within the next two years. If they are fortunate, I foresee the possibility of them being operational at an early stage within five years, by which time their dollar needs would rise substantially. I would advocate a one third/one third/one third mix between federal, local, and corporate contributions for the operations of such schools with the research aspects supported primarily through federal contributions.

(Perhaps a few states would add to the pot available for research.) If the scenarios and learnings of the past ten years are any guide, it would seem reasonable to project that about ten years out we might have enough exemplars of these new approaches to begin another round of structured dissemination such as that advocated in Strategy Number One. Success in joining these two scenarios should take the country into the next century with a strengthened sense of self and move us toward a strengthened democratic world. I look forward to being part of the adventure.

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